

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 703334PCT	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/CA2004/002146	International filing date (<i>day/month/year</i>) 17 December 2004 (17-12-2004)	Priority date (<i>day/month/year</i>) 18 December 2003 (18-12-2003)	
International Patent Classification (IPC) or national classification and IPC IPC: E05F 15/10 (2006.01) , G01V 3/00 (2006.01) , E05F 15/16 (2006.01) , E05F 15/00 (2006.01)			
Applicant INTIER AUTOMOTIVE CLOSURES INC. ET AL			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. 1 and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 28 June 2005 (28-06-2005)		Date of completion of this report 16 February 2006 (16-02-2006)	
Name and mailing address of the IPEA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001(819)953-2476		Authorized officer Hoan Huynh (819) 934-3467	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/CA2004/002146**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on:
- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- ☐ _____ pages _____ as originally filed/furnished
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ the claims:
- ☐ _____ pages _____ as originally filed/furnished
- ☐ _____ pages* _____ as amended (together with any statement) under Article 19
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ the drawings:
- ☐ _____ pages _____ as originally filed/furnished
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ _____ pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/CA2004/002146**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-15</u>	YES
	Claims	<u>None</u>	NO
Inventive step (IS)	Claims	<u>1-15</u>	YES
	Claims	<u>None</u>	NO
Industrial applicability (IA)	Claims	<u>1-15</u>	YES
	Claims	<u>None</u>	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1: WO 00/44018 (Philipp) 27 July 2000

Document D1 discloses a system and method to detect proximity of a body comprising regulating switching elements 401 during voltage cycles to alternately couple capacitor receiving plate to reference potential and charge integrator. A voltage source 101 and a pair of electrodes (100, 104) separated from each other by a gap. The voltage source 101 is connected to a driven electrode 100, a sampling charge detector 402 is connected to a second receiving electrode 104, and the output of the charge detector is, in turn, fed into an amplifier 403 and a charge measurement means 407. Disturbances in coupling between the two electrodes 100, 104 are detected through the changes in capacitance between the electrodes when object approaches or contacts the panel. The timing relationships between the electrode drive signal from the voltage source 101 and the sample timing of switch 401, as shown in FIG. 4b, are provided by a digital controller 408. The detection method begins with the reset switch 404 is closed in order to reset the charge integrator 402 to a known initial state (e.g., zero volts). The reset switch 404 is then opened, and at some time thereafter the sampling switch 401 is connected to charge integrator 402 via terminal 1 for an interval during which the voltage source 101 emits a positive transition, and thereafter reconnects to terminal 0, which is an electrical ground. The voltage source 101 then returns to ground, and the process repeats again. At the end of a repetition of 'n' of these cycles, (where n is a finite non-zero integer) the sampling switch 401 is held at position 0 while the voltage on the charge integrator 402 is measured by a measurement means 407. After the measurement is taken, the reset switch 404 is closed again, and the cycle is restarted.

Novelty (N)

Claims 1-15 appear to meet the criteria set out in **PCT Article 33(2)**, because the prior art does not teach a system and method for sensing the presence of an object in the path of a closure device of a motor vehicle. The system comprising first and second electrodes, a reference capacitor, a first switch for selectively connecting the first electrode to the reference capacitor or to chassis ground, a second switch for selectively connecting the second electrode to a first voltage reference source or to chassis ground, and a controller for controlling the first and second switches. These claims are considered to be novel in view of the closest art D1 since D1 failed to disclose a first switch means for selectively connecting the first electrode to the reference capacitor or to chassis ground. D1 also failed to teach the step of short circuiting parasitic capacitance between the electrode and chassis ground.

Inventive Step (IS)

Claims 1-15 comply with **PCT Article 33(3)**. The claims are considered to involved an inventive step since, having regard to the prior art, it is not obvious to a person skilled in the art to add a switch means for selectively connecting the first electrode to the reference capacitor or to chassis ground in order to short circuit the parasitic capacitance between the electrode and chassis ground.

Industrial Applicability (IA)

The subject matter of claims 1-15 is considered to be industrial applicable and thus fulfills the requirement of **PCT Article 33(4)**.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. The drawing s and description do not comply with Rule 11.13 (m) of the PCT. The same features, when denoted by reference signs, shall, throughout the entire application, be denoted by the same signs. Reference character C1 has been used to designate both "reference capacitor", "discharging capacitor", and "control signal".

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 7 is indefinite and does not comply with Article 6 of the PCT due to the nature of the preamble of the claim. When a preamble refers to a multiplicity of prior claims, a redundancy could occur in that the body of the claim could be repeated when several claims are combined. The preamble should read as "according to any one of claims...".
2. A statement in the description, such as found on page 8 which incorporates by reference any other document, does not comply with Rule 5.1 (ii) of the Regulation under the PCT .